

Clean Claims – Following Entry of this Amendment dated 3/10/03

In the Claims

(Twice Amended) 1. A method of protecting a silica-containing article used in the manufacture of an optical fiber, the method comprising the steps of:

providing a silica-containing article used in the manufacture of an optical fiber;
applying a protective organic layer to the silica-containing article;
removing, by cleaning, particulates from the protective layer; and
ablating by heating the protective layer during subsequent processing of the silica-containing article.

2. The method of claim 1, wherein the protective layer is applied to a consolidated glass surface.

3. (Cancelled)

(Previously Amended) 4. The method of claim 2, wherein the protective layer leaves essentially no detrimental inorganic residue after the step of ablating.

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

(Amended) 10. The method of claim 1, wherein the protective layer includes at least one of a water soluble polymer, a thermoplastic polymer, a latex based polymer, a thermoset polymer, and a UV curable polymer.

(Amended) 11. The method of claim 1, wherein the organic material forms a self-assembled monolayer on the silica-containing article.

(Amended) 12. The method of claim 1, wherein the organic material includes at least one of hydrocarbon silane, fluorocarbon silane, epoxy functional silanes, acrylate functional silane, amine functional silane, thiol functional silane, phenyl functional silane, an alkyl and aryl ammonium compound, acrylate polymer, polyvinyl alcohol, and a wax.

13. **(Cancelled)**

(Previously Amended) 14. The method of claim 2, wherein the step of removing particulates is accomplished by

wiping with a substrate containing isopropyl alcohol;
blowing with super critical CO₂; or
rinsing in liquid water.

15. **(Cancelled)**

16. The method of claim 2, wherein the silica-containing article includes one of a core cane and a core blank used in an outside vapor deposition process.

17. The method of claim 2, wherein the silica-containing article includes a glass tube used in an inside vapor deposition process.

18. The method of claim 2, wherein the silica-containing article is a fiber preform from which an optical fiber can be drawn and the protective layer is applied directly onto the fiber preform.

19. The method of claim 18, further comprising the step of drawing an optical fiber from the fiber preform.

20. The method of claim 19, wherein the protective layer ablates during drawing of an optical fiber from the fiber preform.

21. The method of claim 20, wherein the protective layer leaves essentially no detrimental inorganic residue after ablating.

22. **(Cancelled)**

23. **(Cancelled)**

24. **(Cancelled)**

25. **(Cancelled)**

26. **(Cancelled)**

(Amended) 27. The method of claim 1, wherein the protective layer includes at least one of a water soluble polymer, a thermoplastic polymer, a latex based polymer, a thermoset polymer, and a UV curable polymer.

(Amended) 28. The method of claim 18, wherein the organic material forms a self-assembled monolayer on the fiber preform.

(Amended) 29. The method of claim 1, wherein the organic material includes at least one of hydrocarbon silane, fluorocarbon silane, epoxy functional silanes, acrylate functional silane, amine functional silane, thiol functional silane, phenyl functional silane, an alkyl and aryl ammonium compound, acrylate polymer, polyvinyl alcohol, and a wax.

30. **(Cancelled)**

31. **(Cancelled)**

(Previously Amended) 32. The method of claim 18, wherein the fiber preform is formed by adding additional soot materials by an outside vapor deposition process onto a core cane and a core blank, the method further comprising the steps of applying a protective layer to at least one of the core cane and the core blank and removing particulates from the protective layer on the at least one of the core cane and the core blank prior to the step of ablating.

(Previously Amended) 33. The method of claim 18, wherein the fiber preform is formed by an inside vapor deposition process from a silica-containing tube, the method further comprising the steps of applying a protective layer to the silica-containing tube and removing particulates from the protective layer on the silica-containing tube prior to the step of ablating.

50. A method of protecting a silica-containing article used in the manufacture of an optical fiber, the method comprising the steps of:

providing a silica-containing article used in the manufacture of an optical fiber; and
applying a protective layer comprising a silane to a consolidated glass surface of the silica-containing article.

51. The method of claim 50, wherein the silane includes at least one of a hydrocarbon silane and a fluorocarbon silane.

52. The method of claim 50, wherein the silane includes at least one of epoxy functional silanes, acrylate functional silane, amine functional silane, thiol functional silane, and phenyl functional silane.

53. A method of protecting a silica-containing article used in the manufacture of an optical fiber, the method comprising the steps of:

providing a silica-containing article used in the manufacture of an optical fiber; and
applying a protective layer comprising an alkyl ammonium compound, an aryl ammonium compound, or a wax to a consolidated glass surface of the silica-containing article.

54. A method of protecting a silica-containing article used in the manufacture of an optical fiber, the method comprising the steps of:

providing a silica-containing article used in the manufacture of an optical fiber;
applying a protective organic layer to a consolidated glass surface of the silica-containing article; and

at least partially removing, by washing, the protective layer during subsequent processing of the silica-containing article.

55. The method of claim 54, wherein the step of washing is accomplished with water or a solvent.

56. The method of claim 54, wherein the protective layer is a water-soluble polymer.

57. The method of claim 54, wherein the protective layer is polyvinyl alcohol or hydroxymethylcellulose.

58. A method of protecting a silica-containing preform used in the manufacture of an optical fiber, the method comprising the steps of:

- providing a silica-containing preform used in the manufacture of an optical fiber;
- applying a protective organic layer to the silica-containing preform;
- removing, by cleaning, particulates from the protective layer; and
- ablating by heating the protective layer during subsequent drawing of the silica-containing preform.